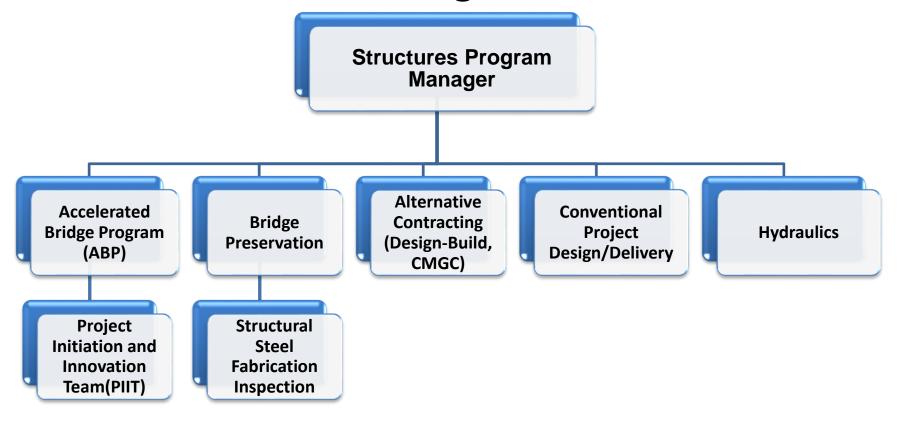
# **Legislative FY18 Budget** Presentation **VTrans Structures Section January 26, 2017**

Wayne Symonds, PE Structures Program Manager

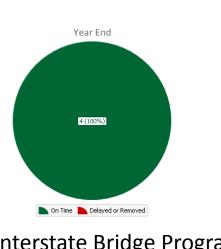
Pam Thurber, PE Bridge Management Engineer

## **Structures Functional Organizational Chart**

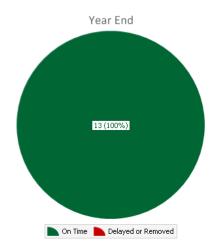


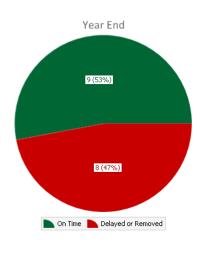
- 42 Positions Engineers, Project Managers and Technicians
- 3 Summer Interns (2 UVM and 1 VTC)

## **2016 Bid Advertisement Performance**

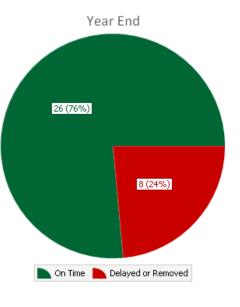


Interstate Bridge Program





State Bridge Program



All Structures

Town Highway Bridge Program

## **Project Delivery Performance Measures**

- Measure Project Manager success in delivering information to resources to obtain critical clearance documents and meet project schedule for advertising:
  - Environmental Permits
  - Right of Way

Project	Project Description	Activity Description	early start	early finish	activity	PROJECT MANAGER	-											2018		
Name		•	date	date	name		ec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
13B332	SEARSBURG BF 010-1(50	Develop ROW Plans and	27Feb17	30Jun17	080.01	WARK, NICHOLAS	1		9		7	, o								
13C268	WATERFORD BF 0225(4)	Environmental Permits	03M ar17	07Jul17	060.05	LANDRY, DANNY														
15B051	WATERFORD BF 0225(5)	Environmental Permits	03M ar17	07Jul17	080.05	LANDRY, DANNY														
13B270	WOODFORD BF 010-1(52)	Develop ROW Plans and	06M ar17	10Jul17	080.01	WARK, NICHOLAS														
95A208	COLCHESTER IM 089-3(89	Environmental Permits	08M ar17	100 ct17	080.05	HIGGINS, KRISTIN		ľ												
13J306	NEWFANE BF 0106(6)	Develop ROW Plans and	17M ar17	20Jul17	080.01	CARLSON, CAROLYN											1111111			
13D654	ESSEX BF 5400(9)	NEPA Document	06Apr17	09Aug17	040.04	YOUNG, ROBERT				55										
13J 198	WEST HAVEN-WHITEHAL	Environmental Permits	14Apr17	14Sep17	080.05	LANDRY, DANNY														
13A098	WESTMINSTER IM 091-1(7	Environmental Permits	10M ay17	14Sep17	080.05	PELLETIER, WENDY		ľ												
11A224	LEBANON-HARTFORD IM	NEPA Document - NH	11May17	29Aug17	040.04	LANDRY, DANNY														
15J 182	CORNISH-WINDSOR BF.A	NEPA Document - NH	11May17	27Jun17	040.04	LANDRY, DANNY														
13B266	PITTSFORD BF 019-3(59)	Develop ROW Plans and	15M ay17	19Sep17	080.01	BONNE AU, DOUGLAS														
15J 182	CORNISH-WINDSOR BF A	Develop ROW Plans and	18M ay 17	20Jul17	080.01	LANDRY, DANNY														
13B256	BRISTOL BF 021-1(33)	Environmental Permits	19M ay17	08Nov17	080.05	CARLSON, CAROLYN		ľ							<b>—</b>	-	\			
13B332	SEARSBURG BF 010-1(50	Environmental Permits	23M ay17	01Dec17	060.05	WARK, NICHOLAS		1												
128466	LANCASTER-GUILDHALL	E nvironmental Permits -	24M ay17	04Dec17	050.05	LANDRY, DANNY														
13J084	ORLEANS VILLAGE BF 03	Develop ROW Plans and	31May17	040 ot17	030.01	BONNEAU, DOUGLAS										-				
13J302	CAVENDISH BO 1442(38)	Develop ROW Plans and	01Jun17	05Sep17	080.01	YOUNG, ROBERT		ľ												
16B 090	MONTGOMERY STP DEC	Environmental Permits	13Jun17	180 ct17	080.05	CARLSON, CAROLYN										- 6				
	H			<del>†</del>	<del> </del>	1	11	1							T					

## **Project Delivery Performance Measure**

Measure Project Manager success in meeting advertising date within 30 days of the baseline.

Project	Project Description	Activity Description	early start	early finish	activity	PROJECT MANAGER	20	017											2018					
Name	Project Description	Activity Description	date	date	name	PROJECT MANAGER	ec J	lan	Feb	Mar /	Apr 1	May Ju	n Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar /	Apr 1	May J	Jun
120598	ST. ALBANS TOWN BF 0279(5)	Advertisement	08Feb17	03Mar17	110.02	MCCARTHY, JAMES																		
98B252	EAST MONTPELIER BRF 037-1(7)	Advertisement	02Mar17	04Apr17	110.02	SARGENT, MARK																		
78F329	MORRISTOWN BRS 0240(3)S	Advertisement	26Apr17	19May17	110.02	CARLSON, CAROLYN																		
12B552	WEYBRIDGE-NEW HAVEN BF 032-1(19)	Advertisement	24May17	16J un 17	110.02	CARLSON, CAROLYN					T													
13J280	WOODSTOCK VILLAGE BF 020-2(43)	Advertisement	30Aug17	29Sep17	110.02	YOUNG, ROBERT																		
120590	JOHNSON BF 0248(7)	Advertisement	20Sep17	200 ct17	110.02	PELLETIER, WENDY																		
130066	JOHNSON BF 0248(4)	Advertisement	20Sep17	200 ct17	110.02	PELLETIER, WENDY																		
98J378	HIGHGATE BO 1448(43)	Advertisement	20Sep17	130 ct17	110.02	BONNE AU, DOUGLAS																		
12A274	DERBY IM 091-3(49)	Advertisement	27Sep17	200 ct17	110.02	CARLSON, CAROLYN																		
13J276	POULTNEY BF 0138(12)	Advertisement	110 ct17	13Nov17	110.02	YOUNG, ROBERT																		
13J304	DANBY BF 0130(3)	Advertisement	110 ct17	03Nov17	110.02	CARLSON, CAROLYN																		
10C222	RICHFORD-SUTTON, PQ BHF 0814(1)	Advertisement	250 ct17	17Nov17	110.02	CARLSON, CAROLYN																		
10B358	BRANDON BHF 019-3(58)	Advertisement	29Dec17	31Jan18	110.02	ROBERTSON, THAD		ľ								-								
12B142	NORTH HERO-GRAND ISLE BHF 028-1(28)	Advertisement CMGC	10Jan18	10Jan18	110.02	SUMNER, TODD													V			$\nabla$		
16B 046	MIDDLEBURY WCRS(23)C/1	Advertisement CMGC	10Jan18	10Jan18	110.02	PERRIGO, JOEL													₩					
13C268	WATERFORD BF 0225(4)	Advertisement	14Feb18	19Mar18	110.02	LANDRY, DANNY													, l					
15B051	WATERFORD BF 0225(5)	Advertisement	14Feb18	19Mar18	110.02	LANDRY, DANNY																		
13B262	LONDONDERRY BF 016-1(33)	Advertisement	14Mar18	30Mar18	110.02	MCCARTHY, JAMES																		
15J 182	CORNISH-WINDSOR BF A003(035)	Advertisement - NH	14Mar18	12Apr18	110.02	LANDRY, DANNY																		
13J082	MONTPELIER BO 1446(36)	Advertisement	04Apr18	27Apr18	110.02	CARLSON, CAROLYN																		
13C 056	BRUNSWICK BF 0271(23)	Advertisement	16May18	11Jun18	110.02	BONNE AU, DOUGLAS																		
10B416	PITTSFIELD BHF 022-1(24)	Advertisement	08Aug18	31Aug18	110.02	BONNE AU, DOUGLAS																		

## 2012 Legacy Project Delivery Goal

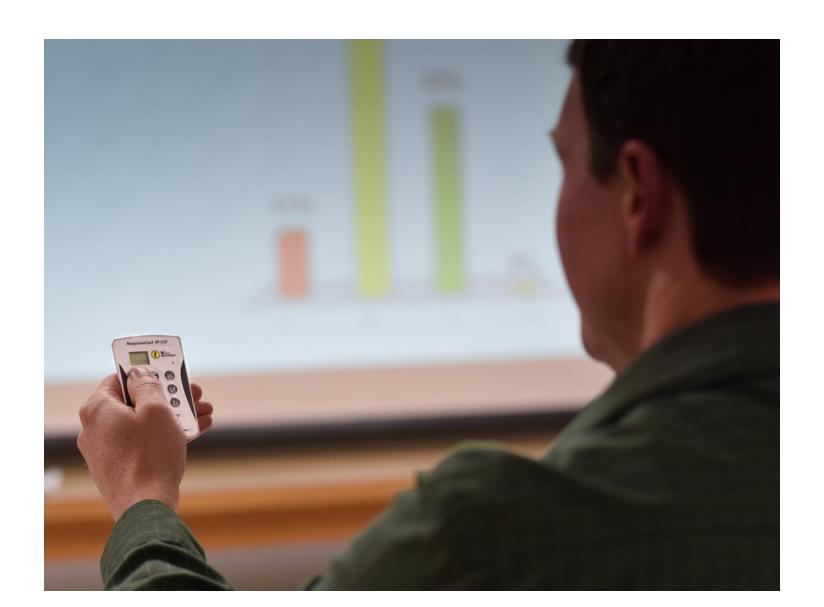
- In 2012 when ABP was Created
  - 128 Projects had construction funding in capital Program
  - Structures Program Goal advance all to bid ad by 2017
  - Included many "Legacy" projects
  - Intended Result by 2017 oldest projects are 5 years
- To date 126 of 128 projects have been Advertised (98%)
- Remaining 2 on schedule for bid ad in 2017
- Success!

## **Strategies for Effective Public Engagement**

- Use a standardized but customizable approach for all communities
- Identify key stakeholders and customers
- Seek valuable input early during the project development process
- Use tools to engage the public during meetings
- Create and maintain community partnerships
- Outreach regularly during construction
- Seek feedback

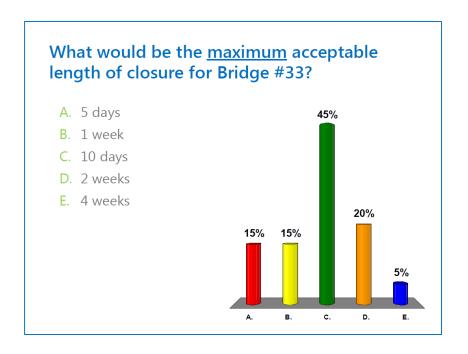


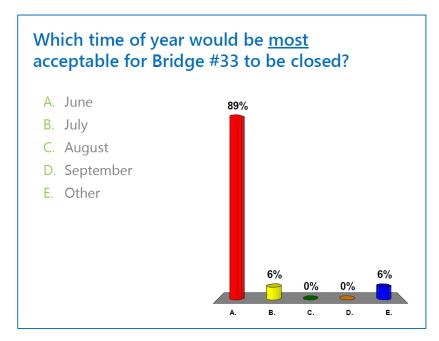
## **Public Outreach and Customer Service**



## "Clickers" Game Changer

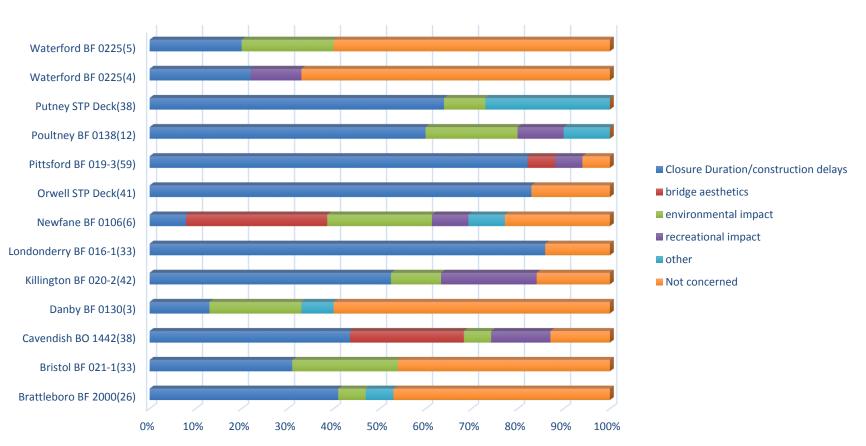
Audience response system incorporated into all project definition public meetings





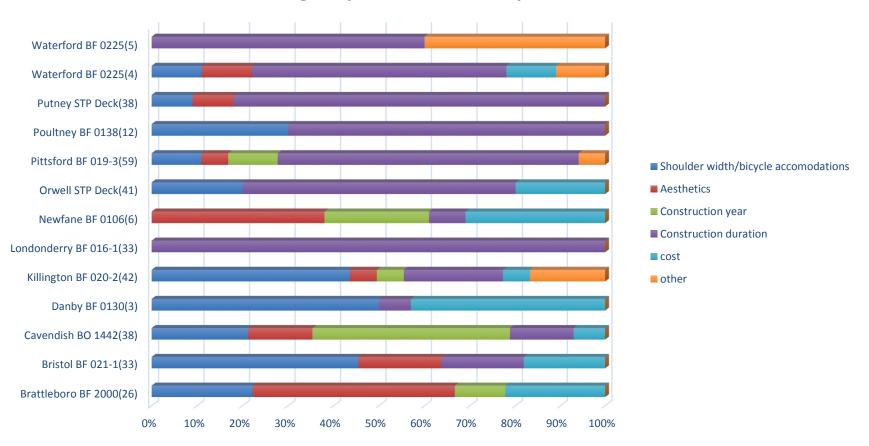
## **Audience Response**

#### What Are You Most Concerned About?



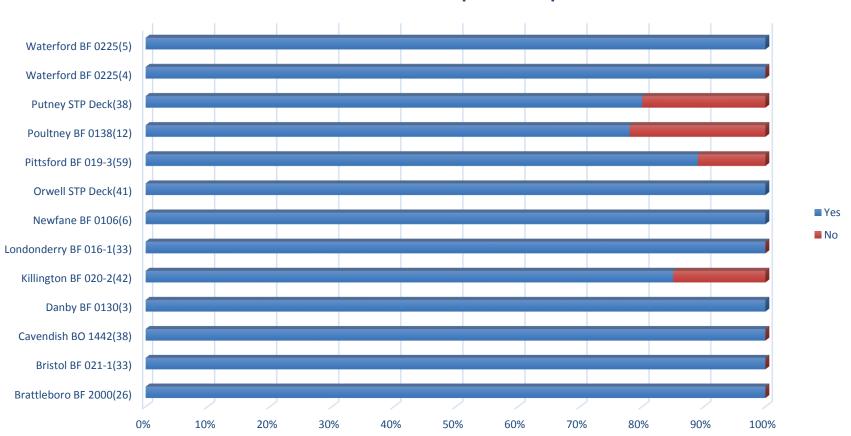
## **Audience Response**

#### What Design Aspect is the Most Important to You?

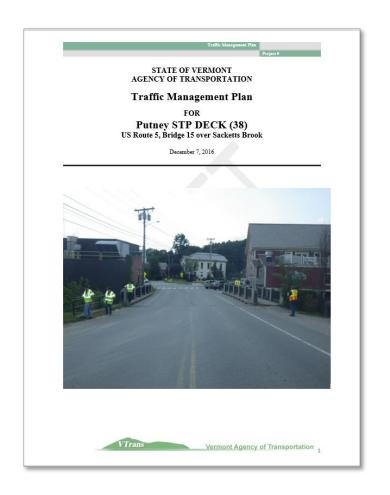


## **Audience Response**

#### Are You Satisfied With the Proposed Scope of Work



# Traffic Management Plans Risk Registers Public Involvement Plans



RISK REGISTER Project Name: Putney STP DECK (38)							cture Replacement	Manager	Jonathan Griffin			
					Risk Identification		Risk Rating			Risk Response		
Status	D#	Type	Category	Title	Risk Statement	Current status/assumptions	Priority Rating	Rationale for Rating	Strategy	Response Actions	Risk Owner	Updated
Active	1	Threat	Design	Removal of the spill through ourbs	By removing these curbs water will have to drain off the bridge which will change the draingage patterns in the project area.	8	Low		Mitigate	Risk is mitigated by adding drainage structures off the bridge.		
Active	2	Threat	Design	Drainage through existing southern abutment	If the 18" pipe is placed through the existing abutment it will require removing a portion of the reinforced concrete abutment near the bearing seat. Additional reinforcing may be require which would increase the removal area and concrete volume.	To be evaluated during final design	Les-		Accept	To ensure the abutment functions properly the additional work may need to be completed.		
Active	3	Threat	Design	Oranage through the NE stone wingwall	Placing the pipe through the stone portion of the wing will require significant removal and reconstruction of the wing, which may require additional construction time and cost.	Mitigated by design	Low		Avoid	Placement of a second catch basin beyond the limit of the wingwall allows for the outet of the pipe outside of the limits of the wingwall		
Active	4	Threat	Design	Placement of the catch basin in the NE quadrant	This basin is to be located directly behind the stone wingwall and abutment, and the configuration of the existing stone abutments is unknown. This basin can be reduced to 4' deep due to the placement of the second CB, but may still conflict with the back batter of the stone mascony.	Further evaluation once abutment configuration is known	Medium		Mtigate	This risk can be mitigated by design once the configuration of the wingwall is known.		
Active	5	Threat	Construction	Short duration closure	If the bridge opening is delayed traffic will need to continue using the long delbur route causing inconvenience to traffic.	Contractors means	Medium		Avoid	Incentitive/disincentive will be included in the project.		
Active	0	Threat	Construction	Construction schedule	The use of an acclerated construction schedule could limit the number of contractors bidding or result in higher bid values.		Medium	17	Accept	This is a known risk.		
Active	7	Threat	ROW	Right-of-way process	If the ROW process is lengthy, then project development time could be affected.		Low		Accept	Minimal ROW is expected for this project		
Active	8	Threat	Construction	Truck turning movements	Placement of barriers for traffic control may impact the truck turning movement into Water Street if not placed property.	Mitgated by design	Medium	11	Mtigate	Placement of barrier will need to be per the contract plans.		
Active	9	Threat	Construction	Substructure repairs	If work is required to repair the bridge seats additional closure time will be needed and projects costs could increase.		Medium		Accept	This is a known risk.		
Active	10	Threat	Design	Evaluation of existing abutments	If the bearing capacity of the existing abutments is not sufficient then the scope of the project will have to be re- evaluated. The abutment configuration is currently unknown.	Further evaluation once abutment configuration is known	100		Mtigate	Probes to determine the shape of the abutments will be completed. The abutments are founded on ledge and it is anticipated that the bearing capacity will be sufficent.		
Active	11	Threat	Design	Bridge geometry	Constructing a curved bridge rail on the west fascia will be difficult to fit to the existing sidewalk and for rebar placement on the straight precast beam.	Mitigated by design	Medium		Avoid	The geometry has been simplified by eliminating the rail and placing a curb that will be cast with a tangent front face to match the beam geometry, and a curved back face to match the sidewalk.		
Active	12	Threat	Design	Western bridge rail	Providing a bridge rail on the western fascia requires a blunt end off the ends to the bridge which is a safety concern.	Mitigated by design	Low		Avoid	This risk will be avoided by eliminating the rail on the wistern fascia.		
Active	13	Threat	Construction	Beam post-tensioning	Due to the proximity of the proposed precast beam to the existing sidewalk and steel ginter access for post- tensioning operations will be very limited.	Contractors means	Low		Accept	This is a known risk.		
Active			10000000		Providing a bridge rail on the western fascia requires a blurt end off the ends to the bridge which is a safety concern. Due to the proximity of the proposed precast beam to the resisting sidewalk and steel ginder access for post-				200000	back face to This risk will rail on the we	match the sidewalk.  be avoided by eliminating the estern fascia.	match the sidewalk.  be avoided by eliminating the estern fascia.

## **Project Factsheets**





#### PROJECT MILESTONES

Preliminary Plans
April 2014
Permitting
August 2014
Right-of-Way Complete
August 2014
Final Design

October 2014
Contract Award
March 2015

Target Construction Schedule







#### HARTFORD (WHITE RIVER JUNCTION) 1-91 BRIDGES

(Hartford IM 091-2(79) project)

Project Location: Town of Hartford in Windsor County on Interstate 91 over Route 5 in White River Junction approximately one half mile north of the junction of I-91 and I-89.

Project Purpose: The purpose of this project is to replace the existing bridges that carry Interstate 91 north and southbound over US Route 5 in Hartford, safely, efficiently and with the least possible impact to road users and the surrounding community. The structures were built in 1966. Age, weather and use have taken a toll on the concrete deck, beams and abutments of the two bridges. Two new bridges will be built during the 2015 construction season.

Accelerated Bridge Program (ABP): The Hartford I-91 Bridges Project has been assigned to the Vermont Agency of Transportation (VTrans) Accelerated Bridge Program, an approach that delivers projects faster, often using innovative techniques and always in collaboration with local communities. Typically, fast track bridge projects are completed in approximately half the time that it would take by conventional construction, often in just one construction season.

By reducing the time it takes to construct a new bridge, VTrans has been able to save money spent on design, utility and ROW impacts, and road closures as well as minimize disruption to travelers and commerce. The ABP encourages streamlining, standardizing design and plan preparation while exploring innovative contracting and construction techniques.

Partnership is a hallmark of the ABP program – with contractors, innovators from other states and local communities. To date, 12 bridges have been rebuilt using the ABP since the program was established in 2012, with 13 planned in 2014.

- Fact sheets for all projects
  - Public Facing to provide transparency
  - Project delivery schedule
  - Project Contact Information
  - Targeted Construction Date
  - Road Closure Information

- Project External Website for all projects
  - Public Facing website
  - All milestone submittals uploaded for public viewing
  - Letter with link sent to stakeholders

www.i91wrj.vtransprojects.vermont.gov

## **Interstate Bridge Program**

## **BRATTLEBORO IM 091-1(65)**

BR 8 N&S AND 9 N&S ON I-91 IN BRATTLEBORO, OVER VT30 AND THE WEST RIVER.



## **MIDDLESEX IM 089-2(41)**

## BR 44 IN MIDDLESEX, US2 OVER I-89 AND THE NEW ENGLAND CENTRAL RAILROAD





## WATERBURY IM 089-2(43)

BR 46 N&S AND BRIDGE NO. 46A ON I-89 IN WATERBURY, OVER STOWE ST. (TH2) AND THATCHER BROOK





## **Budget Development**

#### Interstate Bridge Program - Funding Leveling

BERLIN	HIGGINS,KRISTIN	
IM DECK(42)		Delayed one Year FY 2019 to FY 2020
I-89		Advanced Development Project
BERLIN	HIGGINS,KRISTIN	
IM DECK(43)		Delayed one Year FY 2019 to FY 2020
I-89		Advanced Development Project
BERLIN	HIGGINS,KRISTIN	
IM DECK(44)		Delayed one Year FY 2019 to FY 2020
I-89		Advanced Development Project
BERLIN	HIGGINS,KRISTIN	
IM DECK(45)		Delayed one Year FY 2019 to FY 2020
I-89		Advanced Development Project
MIDDLESEX	FITCH,JENNIFER	
IM 089-2(50)		Delayed one Year FY 2019 to FY 2020
I-89		Advanced Development Project
ROYALTON	FITCH,JENNIFER	
IM 089-1(63)		Delayed one Year FY 2020 to FY 2021
I-89		Advanced Development Project
WEATHERSFIELD	PELLETIER,WENDY	
IM 091-1(69)		Delayed one Year FY 2020 to FY 2021
I-91		Advanced Development Project
WESTMINSTER	PELLETIER,WENDY	
IM 091-1(70)		Delayed one Year FY 2019 to FY 2020
		Advanced Development Project

## **State Bridge Program**

## **EAST MONTPELIER BRF 037-1(7)**

BR 68 ON VT14 IN EAST MONTPELIER, OVER THE WINOOSKI RIVER





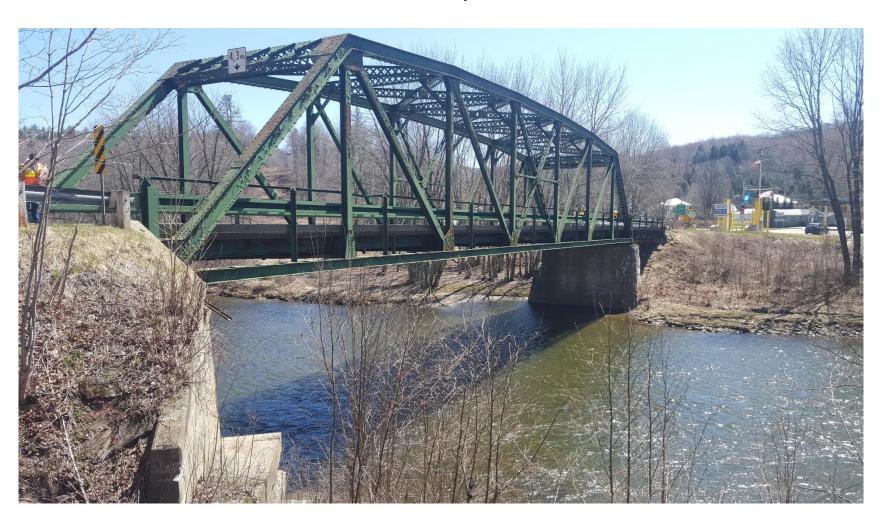
## NORTH HERO-GRAND ISLE BHF 028-1(26)

## BR 8 ON US2 BETWEEN NORTH HERO AND GRAND ISLE, OVER LAKE CHAMPLAIN



## RICHFORD-SUTTON, PQ BHF 0814(1)

BR 3 ON VT105A, OVER THE MISSISQUOI RIVER BETWEEN RICHFORD, VT AND SUTTON, QUEBEC



## **RUTLAND CITY BRF 3000(16)**

BR 2 ON RIVER ST/ DORR Dr. IN RUTLAND CITY, OVER OTTER CREEK



## **RYEGATE STP CULV(10)**

BR 116 ON US5, AND BR27-E ON THE WASHINGTON CO RR OVER MANCHESTER BROOK IN RYEGATE





## **RUTLAND TOWN NH WALL(3)**

US-4 in the town of Rutland near the Rockwell Museum



## WEYBRIDGE-NEW HAVEN BF 032-1(19)

BR 8 ON VT17 BETWEEN WEYBRIDGE AND NEW HAVEN, OVER OTTER CREEK





## **Budget Development**

#### **State Bridge Program - Funding Leveling**

ADDISON	FITCH,JENNIFER	
BF 0172(9)		Delayed one Year FY 2020 to FY 2021
VT-125		Advanced Development Project
BERLIN	FITCH,JENNIFER	
BF 026-1(43)		Delayed one Year FY 2020 to FY 2021
US-302		Advanced Development Project
BRISTOL	CARLSON,CAROLYN	
BF 021-1(33)		Delayed one Year FY 2018 to FY 2019
VT-116		Advanced Development Project
CALAIS	SARGENT,MARK	
BHF 037-2(10)		Delayed three Years FY 2017 to FY 2019
VT-14		Advanced Development Project
CALAIS	SARGENT,MARK	
BHF 037-2(11)		Delayed three Years FY 2017 to FY 2019
VT-14		Advanced Development Project
CALAIS	SARGENT,MARK	
BHF 037-2(12)		Delayed three Years FY 2017 to FY 2019
VT-14		Advanced Development Project
ESSEX	YOUNG,ROBERT	
BF 5400(9)		Delayed one Year FY 2021 to FY 2022
VT-117		Advanced Development Project
HINESBURG	FITCH,JENNIFER	
BF 021-1(35)		Delayed one Year FY2019 to FY 2020
VT-116		Advanced Development Project

#### **State Bridge Program - Funding Leveling**

JOHNSON	PELLETIER,WENDY	
BF 0248(4)		Delayed one Year FY 2017 to FY 2018
VT-100C		
JOHNSON	PELLETIER,WENDY	
BF 0248(7)		Delayed one Year FY 2017 to FY 2018
VT-100C		
KILLINGTON	FITCH,JENNIFER	
BF 020-2(42)		Delayed one Year FY 2018 to FY 2019
US-4		Advanced Development Project
MONTGOMERY	CARLSON,CAROLYN	
STP DECK(40)		Delayed one Year FY 2018 to FY 2019
VT-118		Advanced Development Project
MONTGOMERY	CARLSON,CAROLYN	
STP DECK(47)		Delayed one Year FY 2018 to FY 2019
VT-118		Advanced Development Project
MT. HOLLY	FITCH,JENNIFER	
BF 0133(12)		Delayed one Year FY 2020 to FY 2021
VT-155		Advanced Development Project
PITTSFORD	BONNEAU,DOUGLAS	
BF 019-3(59)		Delayed one Year FY 2020 to FY 2021
US-7		Advanced Development Project
PLYMOUTH	FITCH,JENNIFER	
BF 013-3(13)		Delayed one Year FY 2020 to FY 2021
VT-100		Advanced Development Project

## **Town Highway Bridge Program**

# CHARLOTTE BO 1445(36) Seguin covered bridge





## **Budget Development**

#### **TH Bridge Program - Funding Leveling**

NEWFANE	CARLSON,CAROLYN	
BF 0106(6)		Delayed one Year FY 2020 to FY 2021
Maj-0106		Advanced Development Project

## **Important Links**

#### Accelerated Bridge Program Web Page:

http://vtrans.vermont.gov/highway/structures-hydraulics/accelerated-bridge-program

#### Accelerated Bridge Construction Videos:

https://www.youtube.com/user/VTransTV

### Planned Bridge Closures

http://vtrans.maps.arcgis.com/apps/webappviewer/index.html?appid=369106d8dd c34c1085760884c1fd7031

### Public SharePoint Site (Project External Website)

https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/12J160